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ABSTRACT

Designed as supplemental material to on-going instruction in the vocational program, this third of three picture dictionary booklets in the Arc Welding series is intended to assist the learning handicapped student to master the core vocabulary taught in the trade. Intended for individual or small group instruction with minimal supervision, this module contains six lessons: (1) Groove Welds, (2) Welding Symbols, (3) Basic Joints, (4) Parts of a Weld, (5) Welds, and (6) Measurement. The format for each lesson is (1) general directions, including a list of words taught in that lesson, and (2) each word presented on a separate page with a representative picture and simple definition. (The module is intended for use with a cassette tape and flash cards.) An alphabetical index to the vocabulary words in the module is given at the back of the booklet. Two other dictionaries in this series are available as CE 024 411 and CE 024 412. An accompanying teacher's manual is available separately as CE 024 410. (This is one of five series of materials developed by Project Hire. The two-volume final report of the project is available as CE 024 117 and CE 024 118. See Note for the other series.) (YLB)

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Arc Welding

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Dictionary

CE 024 413

PROJECT HERE

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Arc Welding Dictionary

For Resource Room Instruction

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ARC WELDING III

STANDARD ARC WELD TYPES

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BOOK III

Lesson 9

Groove Welds

ARC WELDING

Lesson 9

DIRECTIONS

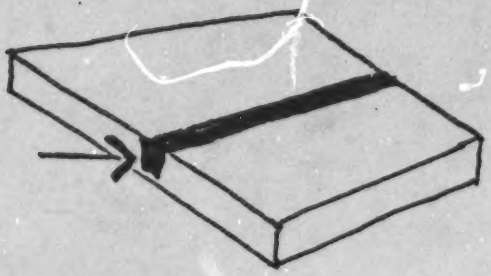
The words in this lesson are:

groove
groove weld
square groove
V groove
bevel groove
U groove
J groove
flare V groove
flare bevel groove

2. Each word has its own page with a picture. Under the picture, you will find the meaning of the word.

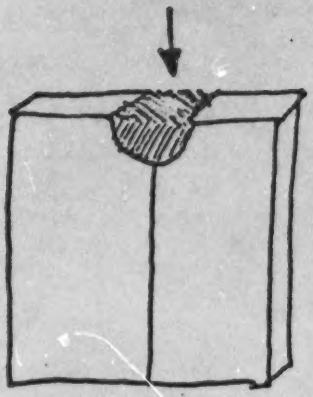
3. Turn the pages and look at the words while you listen.

4. When you get to the last word, turn back to page 91. The tape will say the words again.



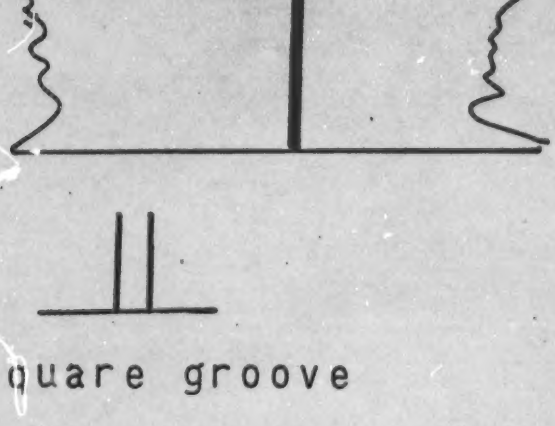
groove

A groove is a cut in the metal.



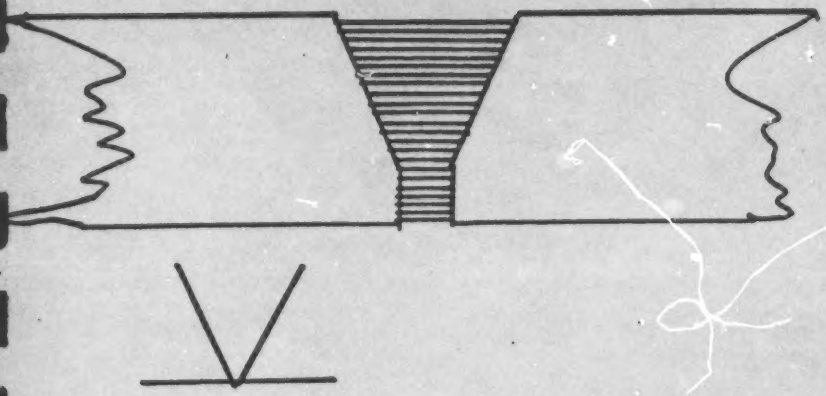
groove weld

A groove weld is a weld made in a space between two pieces of metal.



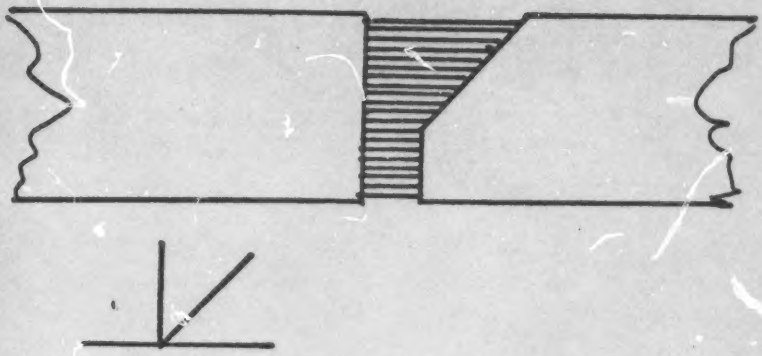
square groove

A square groove is used to join pieces of thin metal.



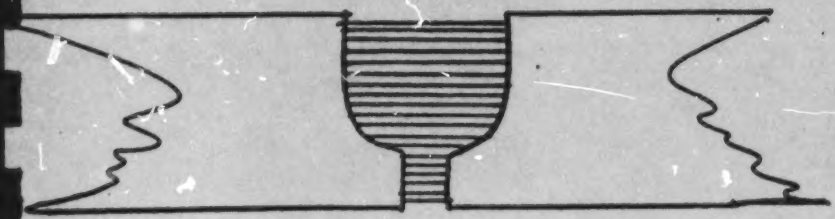
V groove

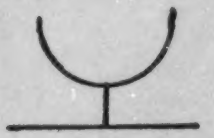
A V groove is used to join pieces of thick metal. The cut looks like the letter V.



bevel groove

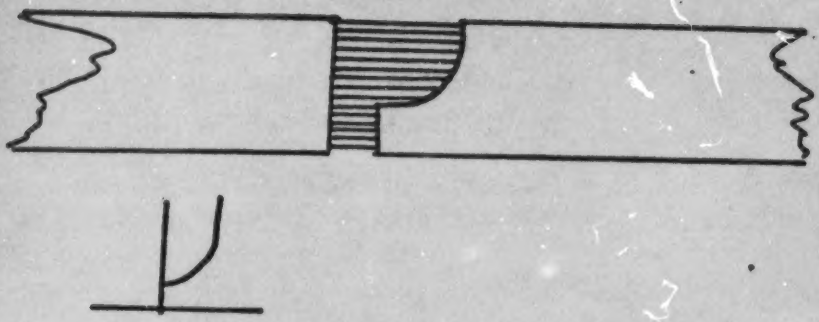
A bevel groove is used to join pieces of thick metal. The cut is made in only one of the pieces of metal. The cut looks like half of the letter V.





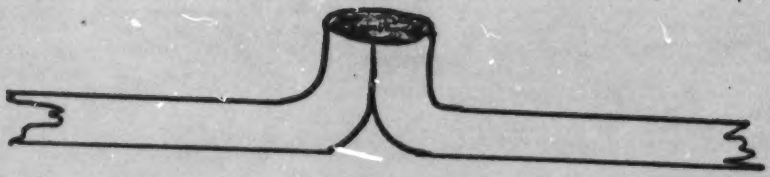
U groove

A U groove is used to join pieces of thick metal. The cut looks like the letter U.



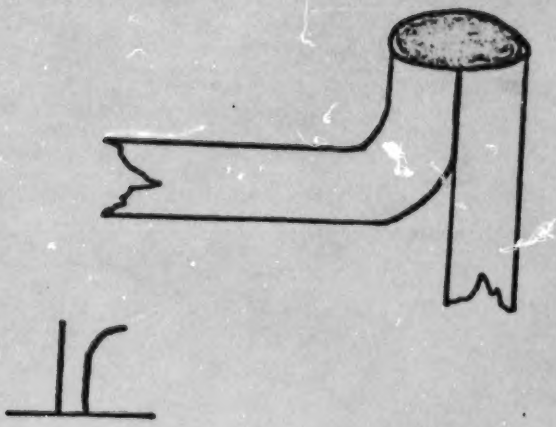
J groove

A J groove is used to join pieces of thick metal. The cut looks like the letter J.



flare v groove

A flare v groove is used to join pieces of thin metal. Both pieces of metal to be welded are bent.



flare bevel groove

A flare bevel groove is used to join pieces of thin metal. Only one of the pieces to be welded is bent.

DIRECTIONS CONTINUED:

1. Now you should get cards 91 to 99 from the box.

2. When you have the cards, look at the first picture and see if you know the meaning of the word.

3. Turn the card over and see if you are right.

4. Do the other cards in the same way.

5. If you do not get each one right, listen to the tape again. Then try the cards again.

6. If you do get them all right, ask your teacher for Activity 9. Now rewind this tape and get cards 91 to 99.

BOOK III

Lesson 10

Welding Symbols

ARC WELDING
Lesson 10

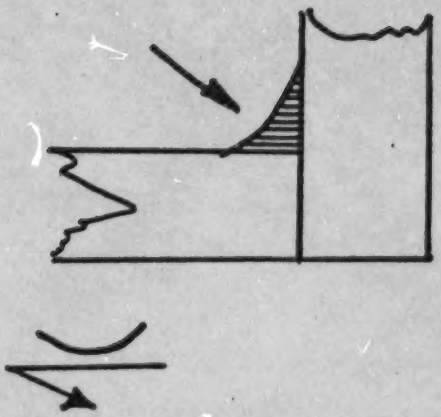
DIRECTIONS:
The words in this lesson are:

concave weld
convex weld
flush contour weld
field weld
fillet weld
weld all around
surface weld

2. Each word has its own page with a picture. Under the picture, you will find the meaning of the word.

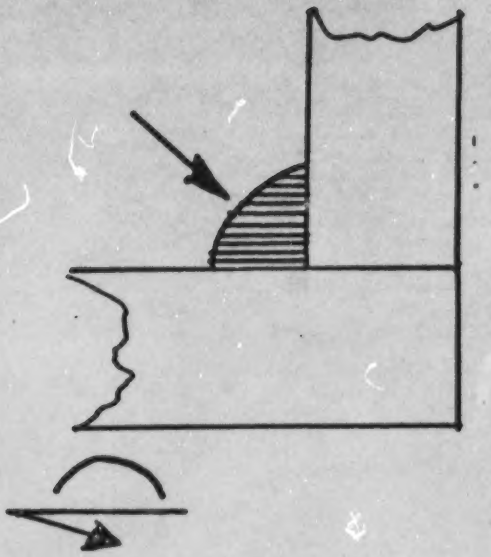
3. Turn the pages and look at the words while you listen.

4. When you get to the last word, turn back to page 100. The tape will say the words again.



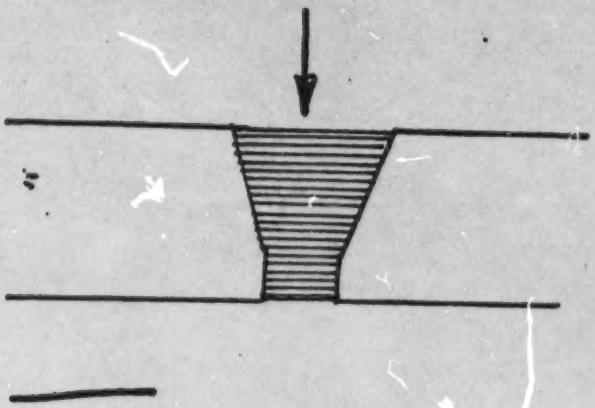
concave weld

A concave weld sinks in the middle.



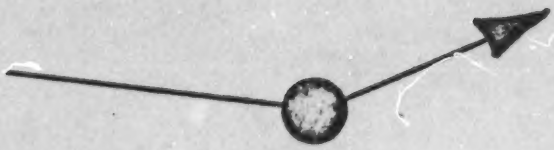
convex weld

A convex weld rises in the middle.



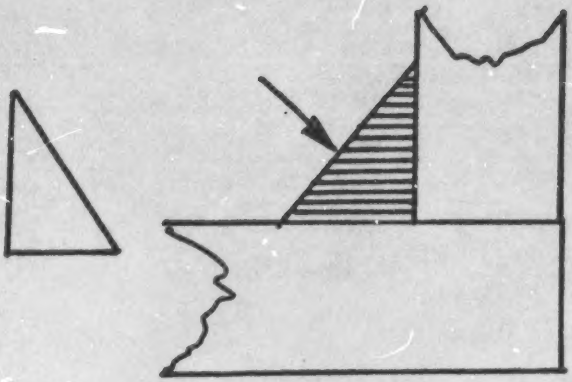
flush contour weld

A flush contour weld is flat.



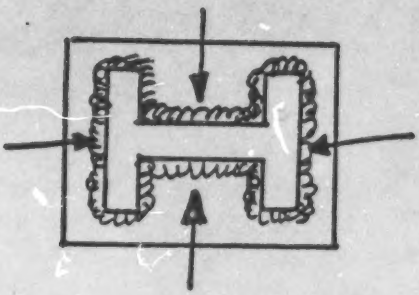
field weld

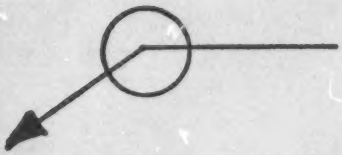
A field weld means that the weld is not made in the shop. The weld is made someplace else.



fillet weld

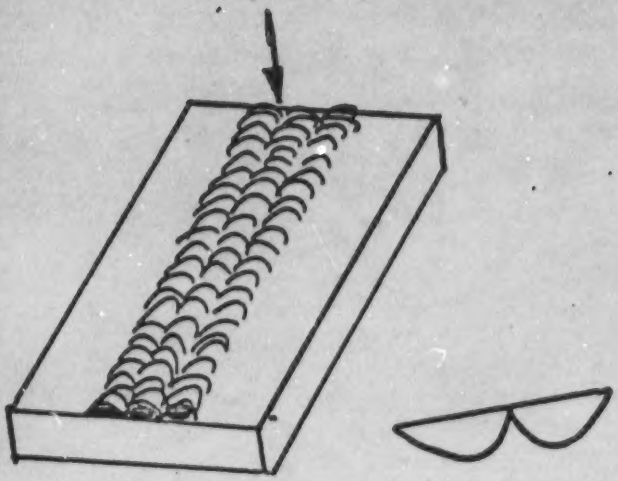
A fillet weld is used to join pieces of metal together so that they make a square corner.





weld all around

A weld all around means to join pieces of metal by welding all around the outside of the pieces.



surface weld

A surface weld is used to build up worn out parts.

DIRECTIONS CONTINUED:

1. Now you should get cards 100 to 106 from the box.

2. When you have the cards, look at the first picture and see if you know the meaning of the word.

3. Turn the card over and see if you are right.

4. Do the other cards in the same way.

5. If you do not get each one right, listen to the tape again. Then try the cards again.

6. If you do get them all right, ask your teacher for Activity 10. Now rewind this tape and get cards 100 to 106.

BOOK III

Lesson 11

Basic Joints

ARC WELDING

Lesson 11

DIRECTIONS

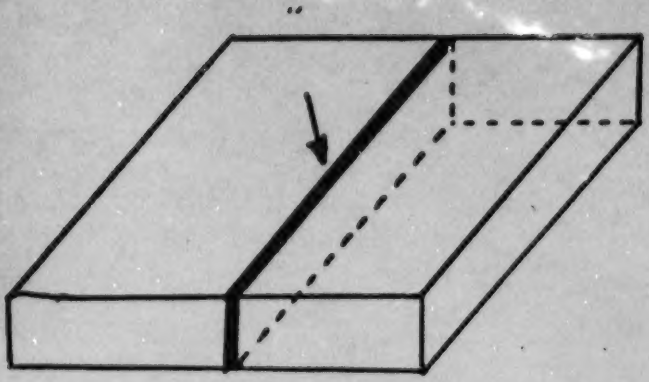
The words in this lesson are:

butt joint
corner joint
tee joint
lap joint
edge joint

2. Each word has its own page with a picture. Under the picture, you will find the meaning of the word.

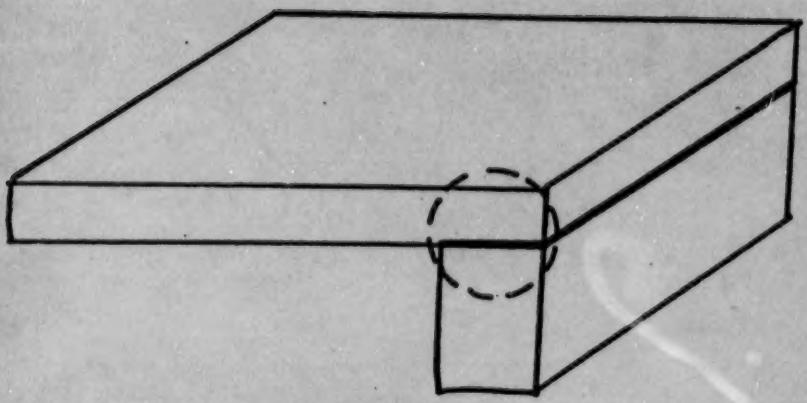
3. Turn the pages and look at the words while you listen.

4. When you get to the last word, turn back to page 107. The tape will say the words again.



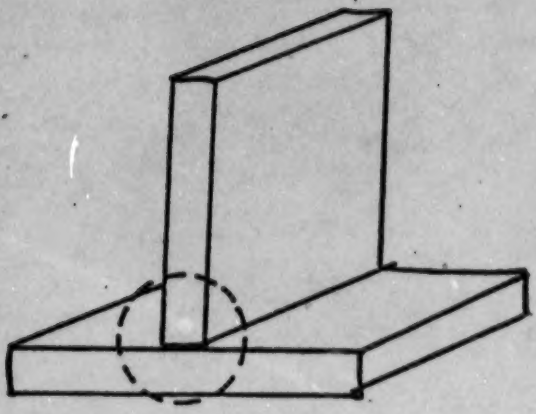
butt joint

A butt joint is used to join two pieces of metal that are laying side by side.



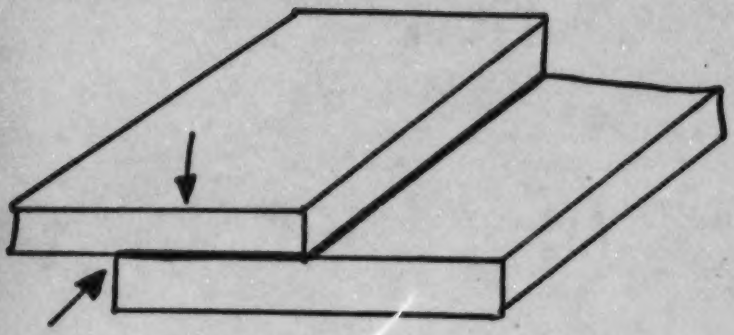
corner joint

A corner joint is used to join two pieces of metal in the form of the letter L.



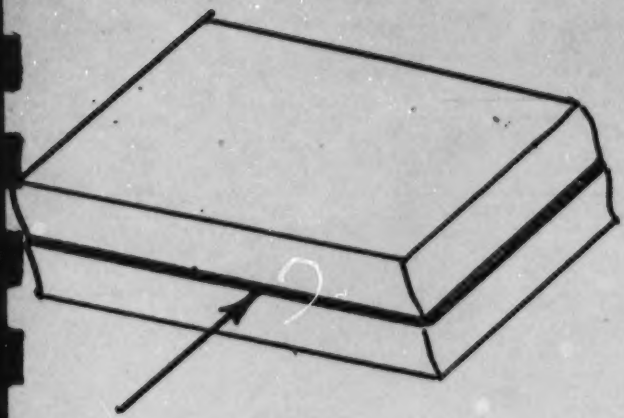
tee joint

A tee joint is used to join two pieces of metal in the shape of the letter T.



lap joint

A lap joint is used to join two pieces of metal when one piece hangs over the other.



edge joint

An edge joint is used to join two pieces of metal that are standing side by side.

DIRECTIONS CONTINUED:

1. Now you should get cards 107 to 111 from the box.

2. When you have the cards, look at the first picture and see if you know the meaning of the word.

3. Turn the card over and see if you are right.

4. Do the other cards in the same way.

5. If you do not get each one right, listen to the tape again. Then try the cards again.

6. If you do get them all right, ask your teacher for Activity 11. Now rewind this tape and get cards 107 to 111.

BOOK III

LESSON 12

Parts of a Weld

ARC WELDING
Book III

DIRECTIONS:

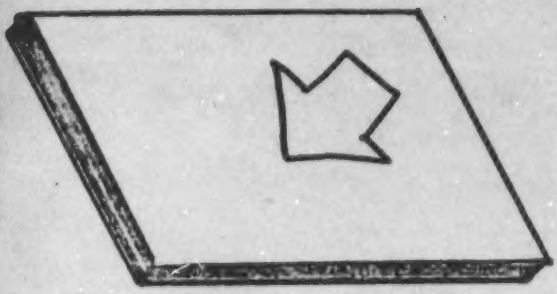
1. The words in this lesson are:

   base metal
   face
   root
   throat
   toe
   leg

2. Each word has its own page with a picture. Under the picture, you will find the meaning of the word.

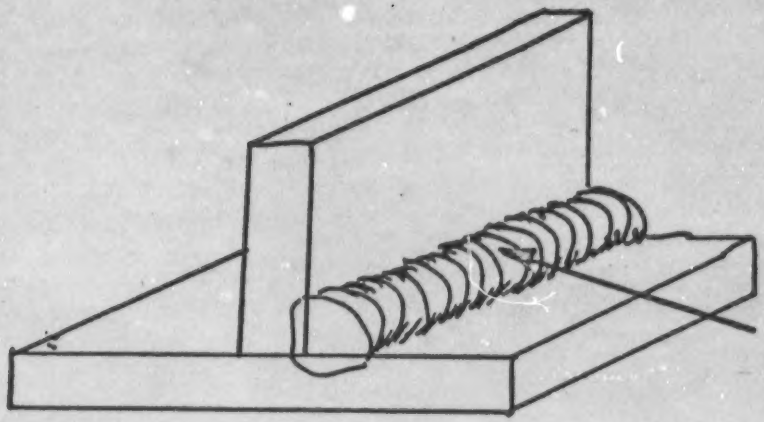
3. Turn the pages and look at the words while you listen.

4. When you get to the last word, turn back to page 12. The tape will say the words again.



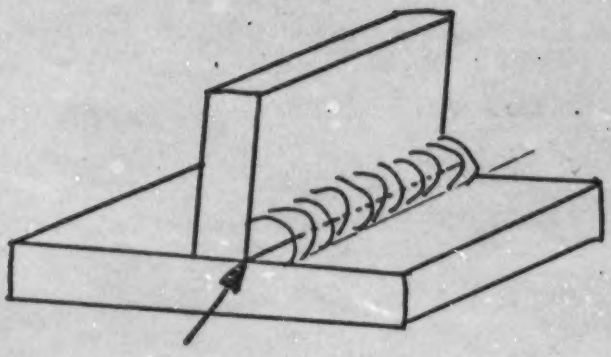
base metal

Base metal is another name for the metal that is to be welded. Base metal is made of iron.



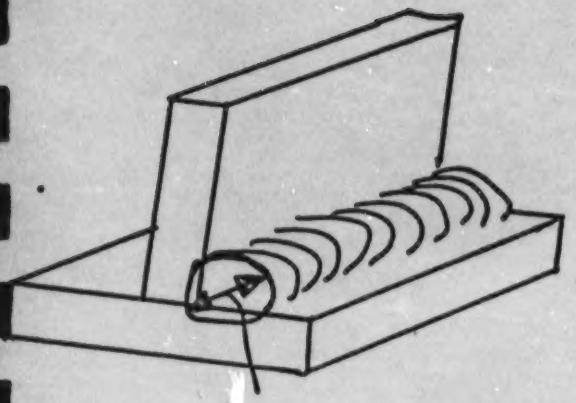
face

The face of a weld is the raised part of the weld you can see from the side where the welding was done.



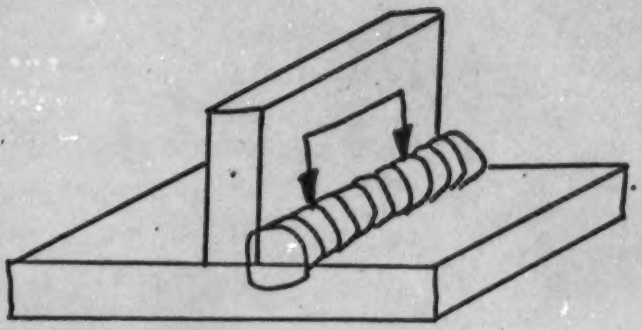
root

The root of a weld is the place where the pieces of metal that are to be welded meet each other.



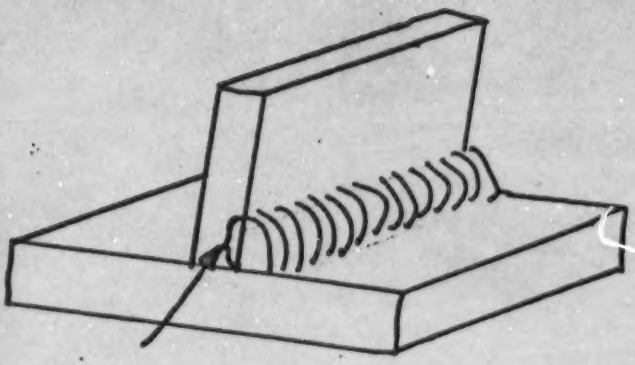
throat

The throat of a weld is the amount of space measured from the root of a weld to the face.



toe

The toe of a weld is where the raised part of the weld meets the base metal.



leg

The leg of a weld is the amount of space measured from the root to the toe.

DIRECTIONS CONTINUED:

1. Now you should get cards 112 to 117 from the box.

2. When you have the cards, look at the first picture and see if you know the meaning of the word.

3. Turn the card over and see if you are right.

4. Do the other cards in the same way.

5. If you do not get each one right, listen to the tape again. Then try the cards again.

6. If you do get them all right, ask your teacher for Activity 12. Now rewind this tape and get cards 112 to 117.

BOOK III

LESSON 13

WELDS

ARC WELDING
Book I

DIRECTIONS:

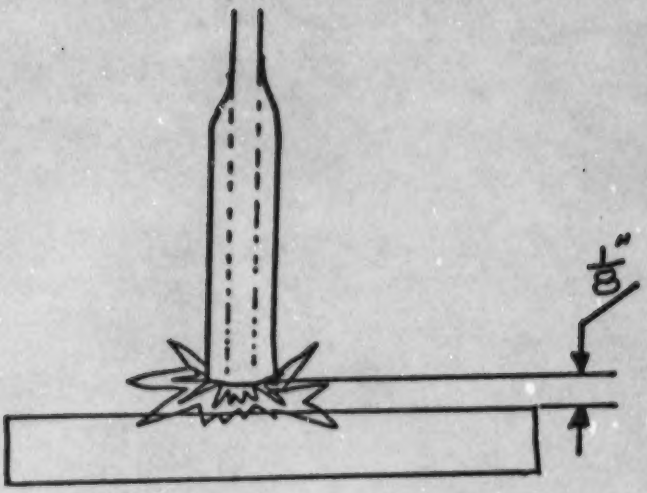
1. The words in this lesson are:

   arc length
   tack weld
   root opening
   root penetration
   melt through weld
   bead
   stringer bead
   continuous weld
   undercut

2. Each word has its own page with a picture. Under the picture, you will find the meaning of the word.

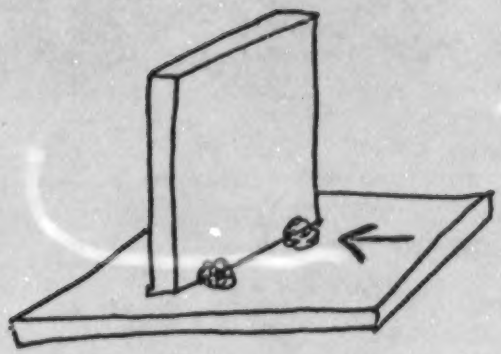
3. Turn the pages and look at the words while you listen.

4. When you get to the last word, turn back to page 118. The tape will say the words again.



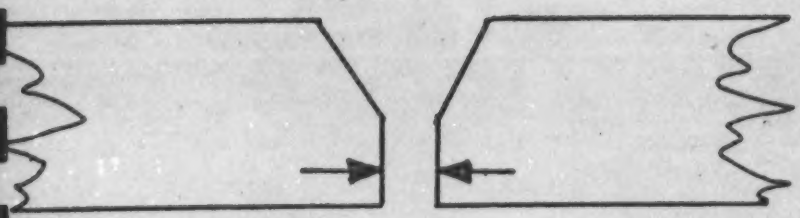
arc length

The arc length is the amount of space from the end of the electrode to the place where the arc touches the metal. Keeping the correct length helps to make a good weld.



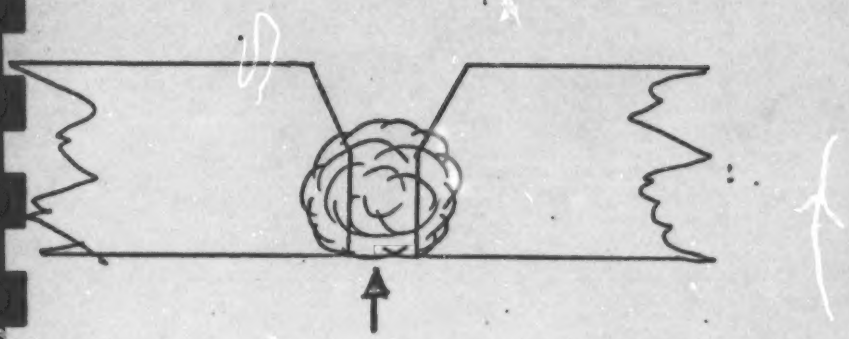
tack weld

A tack weld is a small weld about as big as a button on a shirt. A tack weld holds parts of metal in place during welding.



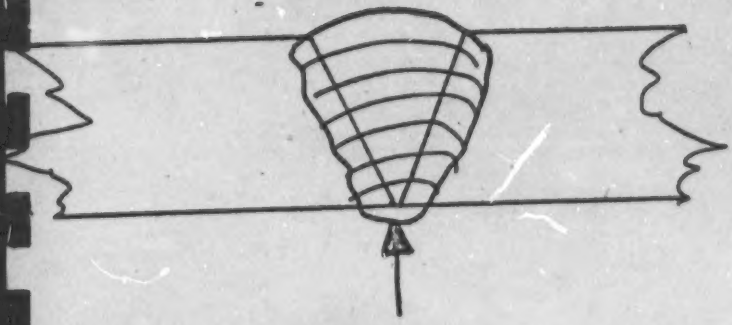
root opening

The root opening is the amount of space between two pieces of metal to be welded. The weld should fill the whole opening.



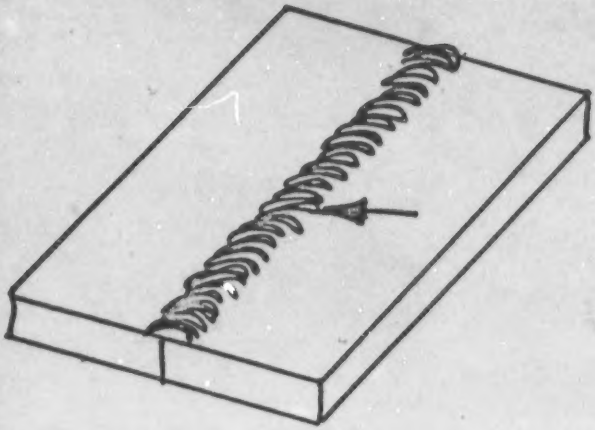
root penetration

The root penetration is how deep the weld goes into the two pieces of metal. The weld should go all the way in order to have a strong welded joint.



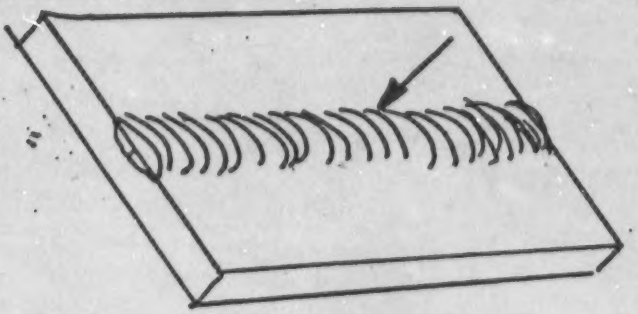
melt through weld

A melt through weld means that the weld metal has gone all the way into the opening, and extra weld metal can be seen on the other side.



bead

Bead is another name for weld metal. The bead comes from the melted electrode metal being put on the work piece.



stringer bead

A stringer bead is a kind of weld made by putting drops of weld metal in a line.

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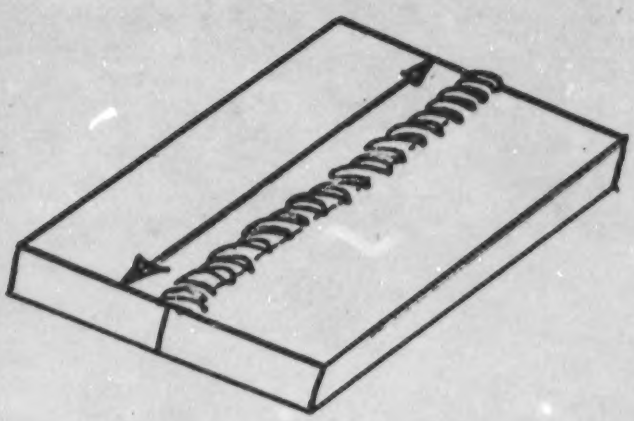
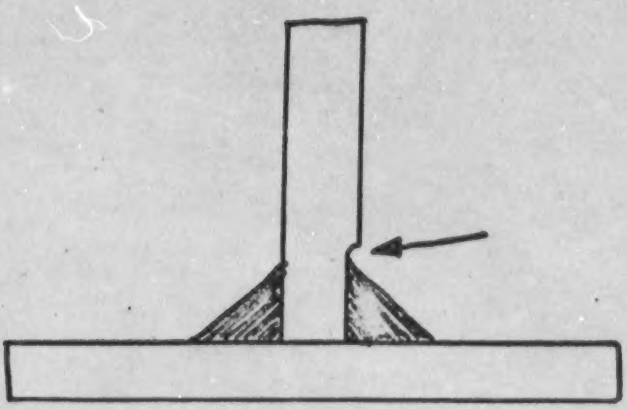


continuous weld

A continuous weld is one long string of weld metal that goes from one end of a joint to the other.



undercut

An undercut is a space near the toe of a weld that is not filled by weld metal. This makes the weld weak.

DIRECTIONS CONTINUED:

1. Now you should get cards 118 to 126 from the box.

2. When you have the cards, look at the first picture and see if you know the meaning of the word.

3. Turn the card over and see if you are right.

4. Do the other cards in the same way.

5. If you do not get each one right, listen to the tape again. Then try the cards again.

6. If you do get them all right, ask your teacher for Activity 13. Now rewind this tape and get cards 118 to 126.

BOOK III

Lesson 14

Measurement

ARC WELDING
Lesson 14

DIRECTIONS

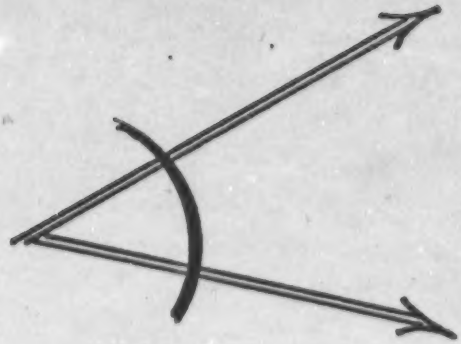
The words in this lesson are:

angle
distance
circumference
diameter
radius
straight edge
degree
T-bevel
protractor
square

2. Each word has its own page with a picture. Under the picture, you will find the meaning of the word.

3. Turn the pages and look at the words while you listen.

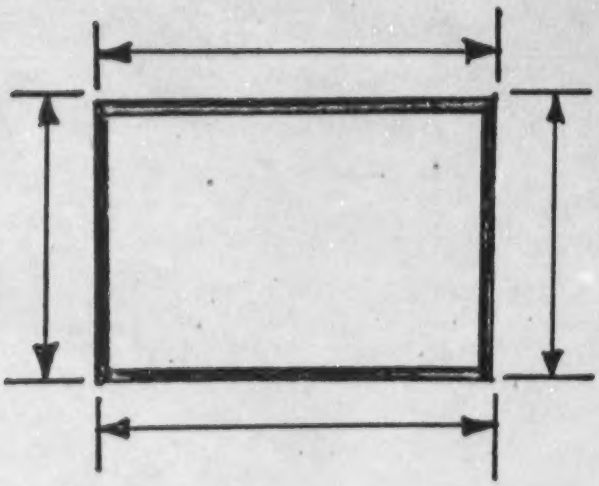
4. When you get to the last word, turn back to page 127. The tape will say the words again.



angle

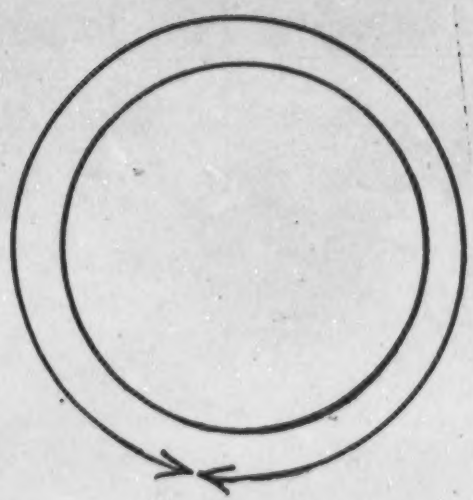
An angle is the figure made when two lines meet

64



distance

Distance is the length around the outside of a figure.

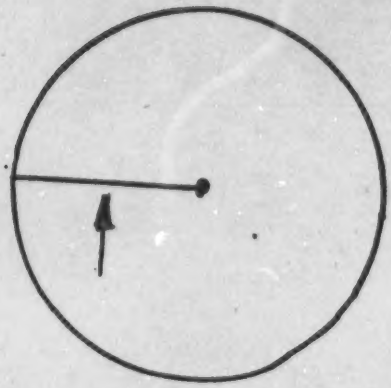


circumference

Circumference is the distance around the outside of a circle.

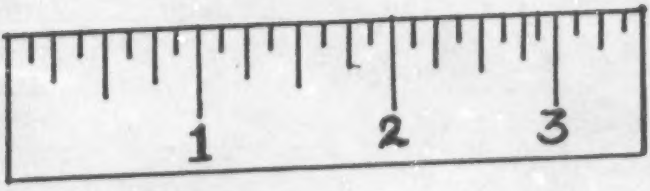
diameter

Diameter is the length across the middle of a circle.



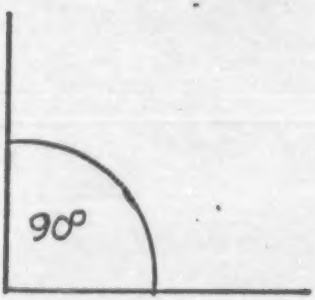
radius

Radius is the distance from the middle of a circle to the edge.



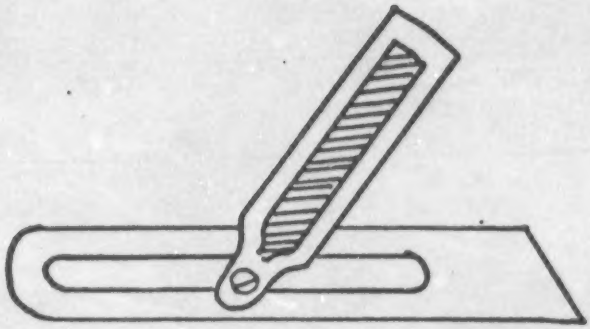
straight edge

A straight edge is a ruler for drawing straight lines.



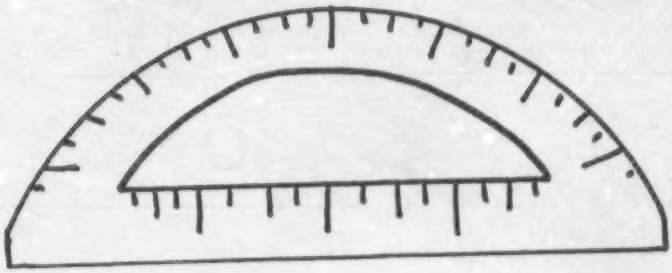
degree

Degree is the size of an angle. For example, a right angle is 90 degrees.



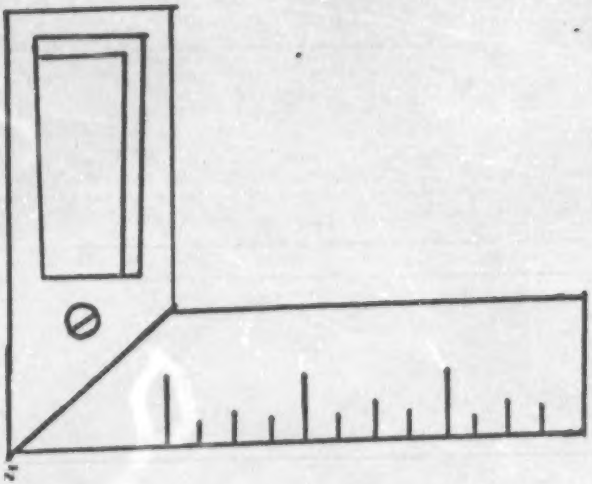
T-bevel

T-bevel is a tool used to set the degree of an angle.



protractor

A protractor is a type of ruler for measuring angles.



square

A square is tool used to check right angles.

DIRECTIONS CONTINUED:

1. Now you should get cards 127 to 136 from the box.

2. When you have the cards, look at the first picture and see if you know the meaning of the word.

3. Turn the card over and see if you are right.

4. Do the other cards in the same way.

5. If you do not get each one right, listen to the tape again. Then try the cards again.

6. If you do get them all right, ask your teacher for Activity 14. Now rewind this tape and get cards 127 to 136.

ARC WELDING III

Standard Arc Weld Types

Alphabetic Index

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fillet weld	104
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